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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/902,576	07/12/2001	Masaru Kogure	32405W084	3624

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EXAMINER

CZEKAJ, DAVID J

ART UNIT	PAPER NUMBER
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2621

DATE MAILED: 11/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/902,576	Applicant(s) KOGURE ET AL.	
	Examiner Dave Czekaj	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 31 August 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 2-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3, 10-12 and 30 is/are allowed.
- 6) ☒ Claim(s) 2, 4-9, 13-23, 25 and 26-29 is/are rejected.
- 7) ☒ Claim(s) 24 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION*****Response to Arguments***

On pages 9-12, applicant argues that Kudoh in view of Harada fail to disclose the fail safe implementation device as claimed. While the applicant's points are understood, the examiner respectfully disagrees. See for example Kudoh column 3, lines 23-34. There Kudoh discloses using the luminance and variance to calculate if a vehicle is present. Kudoh further discloses in column 4, lines 61-67 comparing a luminance value with a threshold to detect a vehicle which has not been detected due to a failure in revealing the characteristic of the vehicle. The examiner notes that a failure based on the luminance values must have occurred since the vehicle was not previously detected. Further, the examiner cited Harada to teach the vehicle alteration. Therefore the combination, taken as a whole, teach all the limitations as claimed. Therefore the rejection has been maintained.

On pages 9-12, applicant requests references for the Official Notices taken.

Please note the rejections below.

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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2. Claims 2, 4-6, 13-14, 17, and 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kudoh (5243663) in view of Harada et al. (6636257), (hereinafter referred to as "Harada").

Regarding claim 13, Kudoh discloses an apparatus that relates to a vehicle detecting apparatus (Kudoh: column 1, lines 9-11). This apparatus comprises "a camera device for taking an image of a view in front of the vehicle" (Kudoh: figures 1-2), "an image recognition device which receives image data from the camera" (Kudoh: figure 2, wherein the image recognition device is the vehicle existence judging unit), and "a determination section for determining whether there is a monitoring system failure based on a luminance state condition" (Kudoh: column 4, lines 65-68, wherein the monitoring failure is the failure in revealing the characteristic of the vehicle). However, this apparatus lacks the vehicle state alteration device and fail-safe implementation device as claimed. Harada teaches that prior art vehicle control systems need highly sophisticated processing algorithms (Harada: column 2, lines 20-35). To help alleviate this problem, Harada discloses "a vehicle state alteration device which alters a vehicle condition and a fail safe implementation device which precludes an activity in the alteration device" (Harada: column 8, line 64 – column 9, line 3, wherein the precluded activity is preventing the steering wheel from being turned based on the detection of the luminance or brightness of another vehicle). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to take the apparatus disclosed by Kudoh and

add the alteration devices taught by Harada in order to obtain an apparatus that operates more efficiently by reducing the complex operations needed to control a vehicle.

Regarding claim 2, Kudoh discloses “the luminance data indicates the luminance-distribution characteristic values indicating a horizontal luminance-distribution on the image” (Kudoh: figures 4-6).

Regarding claims 4-5, Kudoh discloses “the luminance data indicates luminance-distribution characteristics values that include the maximum value of addition on the image and the variance on the image” (Kudoh: figures 4-6; column 3, lines 31-33).

Regarding claim 6, Kudoh discloses “the luminance data includes data related to luminance edges in a monitoring area on the image” (Kudoh: figure 3, column 3, lines 18-21, wherein the luminance data includes data of the whole image, including edges).

Regarding claim 14, Kudoh discloses “calculating luminance data on the image” (Kudoh: figures 4-6, wherein the graphs show the calculated luminance data) and “determining whether there is a monitoring system failure based on luminance calculations derived from the calculator” (Kudoh: column 4, lines 61-67).

Regarding claim 17, Harada discloses “preventing the alteration device from activating a vehicle control change” (Harada: column 8, line 64 – column 9, line 3, wherein the vehicle control change is the steering control).

Regarding claims 19-22, Kudoh discloses "determining whether a fail-safe interruption criteria is present based on two of the following: that an upper luminance saturation factor is larger than a lower saturation factor" (Kudoh: column 3, lines 35-64).

3. Claims 7-9 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kudoh (5243663) in view of Harada et al. (6636257), (hereinafter referred to as "Harada") in further view of Shimomura (6477260).

Regarding claim 7, note the examiners rejection for claim 13, and in addition, claim 7 differs from claim 13 in that claim 7 further requires the data to be the number of luminance edges. Shimomura teaches that prior art detection systems have trouble restricting zones to detect vehicles (Shimomura: column 1, lines 50-64). To help alleviate this problem, Shimomura discloses "the number of related to luminance edges data is the number of luminance edges" (Shimomura: figure 1A, item 10). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to implement the luminance edge data taught by Shimomura in order to obtain an apparatus that can effectively and correctly identify other vehicles/obstacles.

Regarding claim 8, Shimomura discloses "the data related to luminance edges is the distance data obtained by a pair of cameras" (Shimomura: figure 1A).

Regarding claim 9, Shimomura discloses "the monitoring area is set on the upper section of the image where a vehicle running ahead is displayed" (Shimomura: figure 10).

Regarding claim 25, Kudoh in view of Harada in view of Shimomura disclose "preventing the fail safe mode from activating if a vehicle is recognized ahead or a distance to a vehicle is detected" (Harada: column 8, line 64 – column 9, line 3; Shimomura: figure 1A).

4. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kudoh (5243663) in view of Harada et al. (6636257), (hereinafter referred to as "Harada") in further view of Khattak (4899296).

Regarding claim 26, note the examiners rejection for claim 13, and in addition, claim 26 differs from claim 13 in that claim 26 further requires preventing the fail safe mode based on camera shutter speed. Khattak teaches that a correct shutter speed must be chosen that provides unblurred or geographically undisplaced pixel information (Khattak: column 7, lines 36-45). The examiner notes that the fail-safe mode would need to be prevented/activated based on the blurriness of the camera image. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to implement the shutter speed control taught by Khattak in order to prevent a collision based on an unclear image.

5. Claims 15, 16, 18, 23, and 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kudoh (5243663) in view of Harada et al. (6636257), (hereinafter

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referred to as "Harada") in further view of Shimoura et al. (6285393), (hereinafter referred to as "Shimoura").

Regarding claims 15 and 18, note the examiners rejection for claim 13, and in addition, claims 15 and 18 differ from claim 13 in that claims 15 and 18 further require precluding an activity, the activity being a vehicle slow down change. Shimoura teaches that it is well known to prevent steering or braking (slow down change) if a vehicle abnormally approaches another vehicle (Shimoura: column 1, lines 25-30). The examiner notes that control would not be passed back to the user until an indication, or statement, indicating the area safe is received. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to implement the prevention of the slow down change in order to help prevent two vehicles from colliding together.

Regarding claim 16, Shimoura discloses "preventing the warning system from operating in fail-safe mode" (Shimoura: column 1, lines 25-30, wherein once vehicle control is take away from the user, the warning system will deactivate until control is given back to the user).

Regarding claim 23, note the examiners rejection for claim 22 and in addition Shimoura discloses "a number of the calculation of the distance data is smaller than a reference number" (Shimoura: figures 26A, 26B, and 27).

Regarding claims 27-29, note the examiners rejection for claims 13, 15-16, and 18.



***Allowable Subject Matter***

6. Claims 3, 10-12, and 30 are allowed.
7. Claims 24 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dave Czekaj whose telephone number is (571) 272-7327. The examiner can normally be reached on Mon-Thurs and every other Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on (571) 272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DJC

  
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SUPERVISORY PATENT EXAMINER  
TC 2600